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ABSTRACT

Research shows that girls are generally more motivated toward academic activity than boys. This study investigated the effect of teachers on the change of academic motivation in elementary school boys compared to girls. Six Canadian sixth-grade teachers and their students (87 girls and 86 boys) participated in the study. Three teachers were chosen for teaching practices which seemed to favor student motivation; these teachers were randomly matched with teachers from the same sociocultural context. Student motivation was assessed at least three times in all the sixth-grade classes. The results of the student motivation scales indicate that a balance tends to occur between girls' and boys' motivation at the elementary-school level. In motivated classrooms, boys' motivation seems to increase more than that of girls, while in less motivated classrooms, girls' motivation decreases more than that of boys. Contains 20 references. (JPB)

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ED 420 395

THE RELATIONSHIP BETWEEN EFFECTIVE TEACHERS AND THE MOTIVATION CHANGE OF ELEMENTARY-SCHOOL BOYS AND GIRLS

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INTRODUCTION

Research findings reveal that females are generally more motivated toward academic activities than males. However, in spite of the growing interest in the study of motivation of boys and girls, very few investigators have looked at the impact of effective teachers on gender-related change in motivation. Do effective teachers differently affect the change of motivation for boys and girls? Are there teaching practices that can give rise to these gender differences?

OBJECTIVES

The aim of the present study is to investigate the possibility of teachers differently affecting the respective change in motivation of boys and girls at the elementary-school level. The originality of the present study lies in that it focuses on the change in student motivation and on how effective teachers differently influence motivation change for boys and girls.

THEORETICAL FRAMEWORK

Gender differences

The objective of the present research stems from the works of Carone (1975) and Deci, Cascio, and Krusell (1973), among others, who found that certain rewards tend to have an adverse effect on the motivation of female, but not male, student subjects. Maccoby and Jacklin (1975) reviewed a large body of research and concluded that one of the most consistently found gender differences involves cognitive functioning. Eccles and Wigfield, and their colleagues, have also consistently found gender differences in self-perceptions of ability. Their results highlight that boys have higher self-perceptions in math and sports, whereas girls have higher self-perceptions of their ability in language arts (Eccles, 1983; Eccles et *al.*, 1989; Wigfield et *al.*, 1991). Phillips and Zimmerman (1990) found that females had lower perceptions of their competence than males, though gender differences seemed more obvious with ninth graders than with third graders. There is also both intuitive and empirical evidence for the differential socialization of male and female students. Female students are said to be trained, among other things, to inhibit independent assertiveness (Donelson & Gullahorn, 1977), to evaluate themselves in terms of others' approval (Bardwick, 1971), and to be given less competence-eliciting playthings (Williams, 1979). Green and Foster (1986: 36-38) argue that « *the classroom is not a very important area for the display of masculine competence (...). Girls, in contrast, have fewer other opportunities for displaying competence, are encouraged to prefer more passive pursuits (...).. »* Thus , it seems reasonable to assume that motivation may not occur under the same conditions for males and females, and that teachers affect the motivation of elementary-school boys and girls differently.

Motivation

For the past twenty years, most psychologists and educators have agreed that there are two main types of motivation: extrinsic motivation and intrinsic motivation. De Charms (1968) was one of the first researchers to introduce this distinction.

In general, intrinsic motivation (IM) refers to the fact of doing an activity for itself, and to the pleasure and satisfaction derived from participation (Deci, 1975). Contrary to IM, extrinsic motivation (EM) pertains to a wide variety of behaviors in which the goals of an action extend beyond those inherent in the activity itself. They are behaviors which are engaged in as means to an end, and not for their own sake (Deci, 1975). Originally, it was thought that EM referred to behaviors performed without self-determination, and that it could thus only be prompted by external contingencies.

However, Deci and Ryan (1985, 1991) have postulated that various types of EM exist, some of which are self-determined and may be performed through self-regulation. According to these researchers, there are four types of EM which can be ordered along a self-determination continuum. From lower to higher levels of self-determination, they are: external, introjected, identified, and integrated regulation (Figure 1).

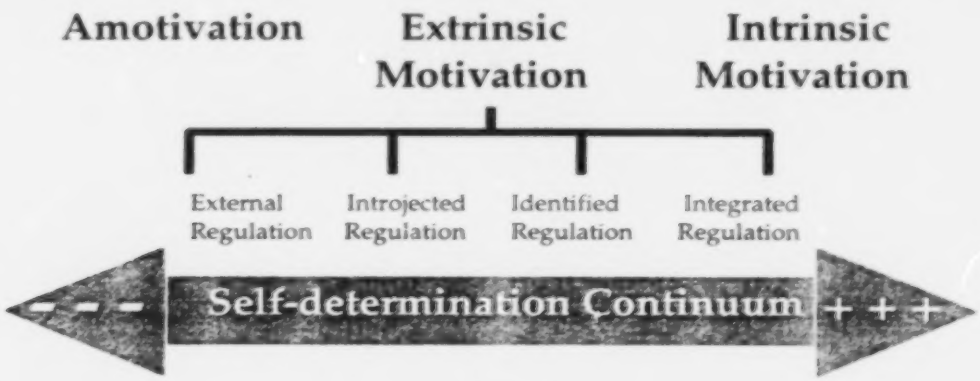

Figure 1

Representation of the Self-determination Continuum Developed by Deci and Ryan (1985, 1991).

External regulation corresponds to EM as it generally appears in the literature. That is, the students' behaviors are regulated through external means such as rewards and constraints. With introjected regulation, the students begin to internalize the reasons for their actions.

However, this form of internalization, while internal to the person, is not truly self-determined since it is limited to the internalization of past external contingencies (Vallerand, Blais, Briere and Pelletier, 1989). To the extent that the behavior becomes valued by the students, and especially that it is perceived as chosen by the students themselves, the internalization of extrinsic motives becomes regulated through identified regulation. The most self-determined form of EM is referred to as integrated regulation. According to Deci and Ryan (1991), this occurs when the students' actions are personally valued and freely performed. Integrated action is therefore authentic.

An increasing amount of research has been undertaken to evaluate Deci and Ryan's EM formulation. The results consistently support the basic premises of the formulation. For instance, results from confirmatory factor analyses on the motivation scales have supported the presence of the first three types of EM in education (Ryan and Connell, 1989; Vallerand and al., 1989; Karsenti and Thibert, 1995).

Along with intrinsic and extrinsic motivation, Deci and Ryan (1985, 1991) have posited that a third type of motivation is important to consider in order to fully understand human behavior. This concept is termed amotivation. Students are amotivated when they do not perceive a link between outcomes and their own actions. They are neither extrinsically nor intrinsically motivated. They are non-motivated. Amotivation can be seen in many ways as similar to learned helplessness (Abramson, Seligman and Teasdale, 1978), as students experience feelings of incompetence and expectancies of uncontrollability. When students are in such a state, they perceive their actions as caused by forces beyond their control and may eventually stop the given behavior.

METHOD

Subjects

Six teachers from six elementary schools in the Montreal area (Quebec, Canada) and their students were selected to participate in the present study. The students were 173 Grade 6 students (87 girls and 86 boys) with a mean age of 11.2 years. In a pool of 18 teachers highly recommended by school principals and administrators, each observed for two days, three were chosen for their teaching practices which seemed to favor student motivation greatly. The three other teachers were randomly selected in schools from the same sociocultural context as the first three chosen.

Student motivation was measured at least three times in all the grade 6 classes (173 students) chosen for the study. In the first day of school, students were asked to complete the motivation scale described below (with some personal data). Ten weeks later, the same pupils were asked to complete the same questionnaire once again.

Measures (Motivation scale)

In order to assess student motivation, a scale based on the theory of Deci and Ryan was used. This scale, similar to Vallerand's questionnaire (Vallerand et al., 1989), has five subscales. That is, it measures amotivation, the first three types of EM, as well as intrinsic motivation. The internal consisiency of the subscales was assessed with the use of the Cronbach alpha. Results from this study reveal that the internal consistency of all subscales is excellent, ranging from .80 to .92. With respect to the validity of the scale used in this study, the present results are also very encouraging. A factor analysis highlights the five-factor structure of the scale and thus provides some support for the factorial validity of the scale. Pearson correlation coefficients conducted between the various subscales also confirm the existence of the self-determination continuum. Furthermore, this correlation is represented by an excellent fit of the *Simplex Structure* between the five types of motivation, that is closely related types of motivation show a more positive correlation, while unrelated concepts such as amotivation and intrinsic motivation exhibit a negative relationship.

RESULTS

Motivation change scores for each subscale (intrinsic motivation, three types of extrinsic motivation and amotivation) were analyzed by means of separate analyses of variance. It is to be noted that there were no significant differences between the six classes on the pre-test. However, with regard to gender differences, it must be underlined that the girls scored significantly higher on two subscales of both the pre-test and the post-test (identified regulation, and intrinsic motivation), whereas the boys scored significantly higher on the other three subscales of both the pre-test and the post-test (amotivation and external and introjected regulation). These results are exemplified figures 2 to 5.

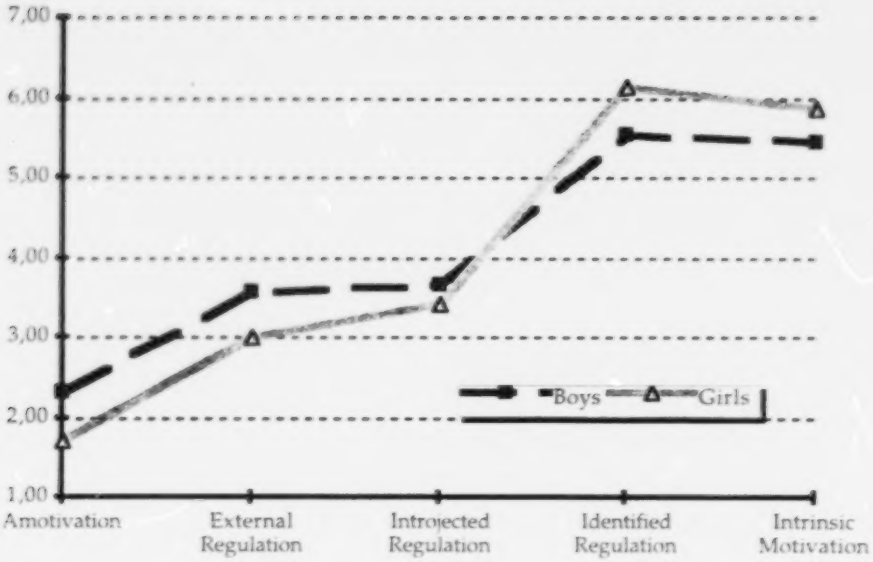

Figure 2
Initial Level of Motivation for Boys and Girls, in All Six Classes.

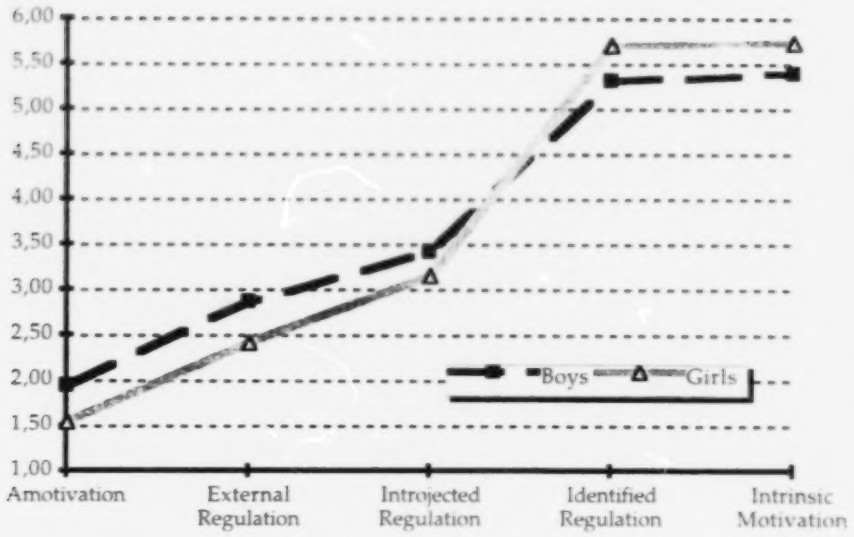

Figure 3
Level of Motivation for Boys and Girls after 10 weeks, in All Six Classes.

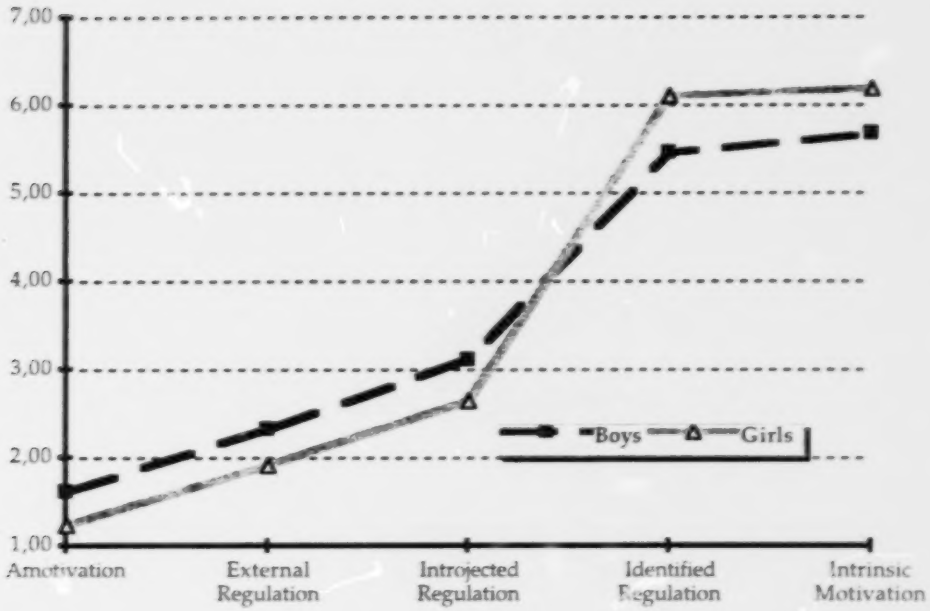

Figure 4
Level of Motivation for Boys and Girls after 10 Weeks, in the Observed Classes.

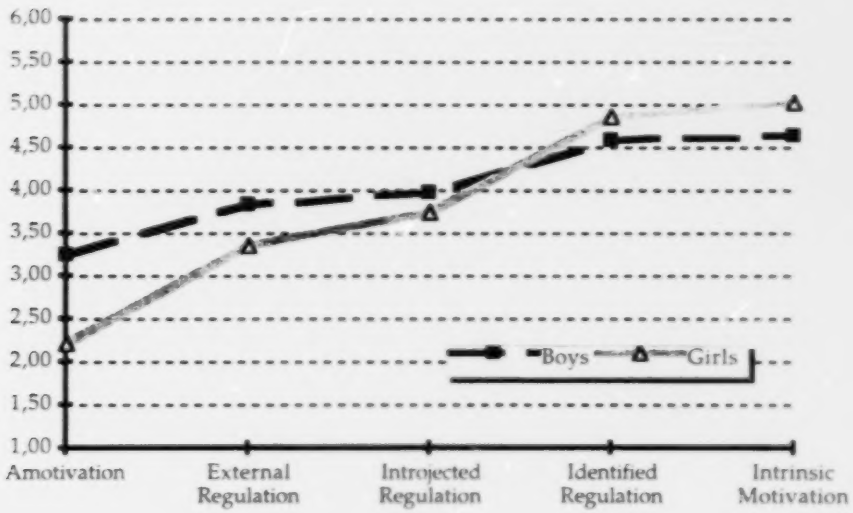

Figure 5
Level of Motivation for Boys and Girls after 10 Weeks, in the Randomly Selected Classes.

While significant changes in motivation were recorded in all six classes, it is interesting to note that, for the students in the three randomly selected classes, motivation scores after 10 weeks were significantly higher in amotivation, external regulation and introjected regulation, whereas they were significantly lower in identified regulation and intrinsic motivation. It is interesting to note that effective teachers had a significantly greater impact on boys than on girls. As shown in Figure 6, the boys' motivation change on four of the five subscales was greater than that of the girls (p <0,05 to p <0,0001). Their increase in identified regulation and intrinsic motivation was greater than that of the girls, and their decrease in amotivation, external and introjected regulation was also greater than that of the girls. On the contrary, as shown on Figure 7, in the randomly selected classes the girls' motivation change was significantly higher on all five subscales (p <0,05 to p <0,0001). The girls' decrease in identified regulation and intrinsic motivation was greater than that of the boys, and their increase in amotivation, external and introjected regulation was also greater.

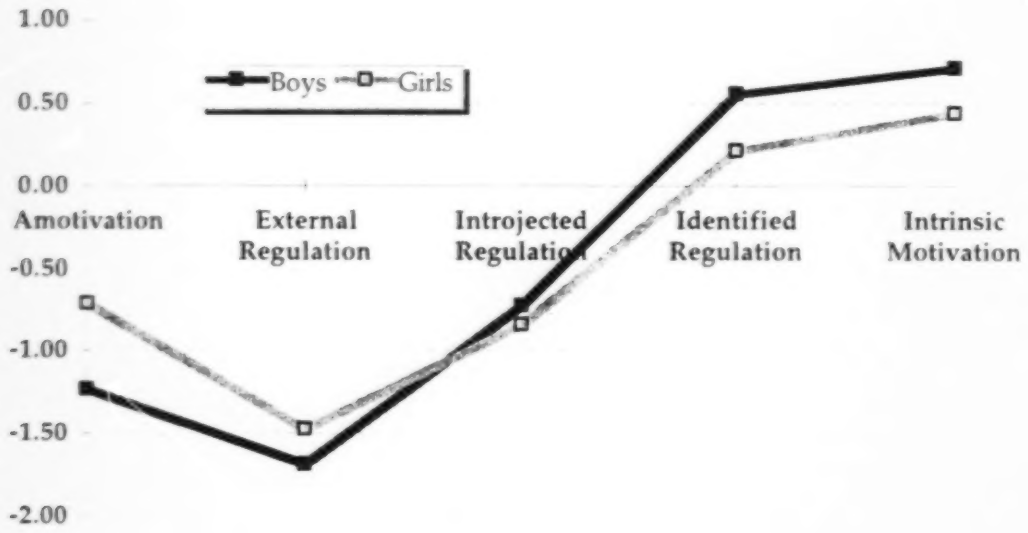

Figure 6

Motivation Change for Boys and Girls in the Observed Classes.

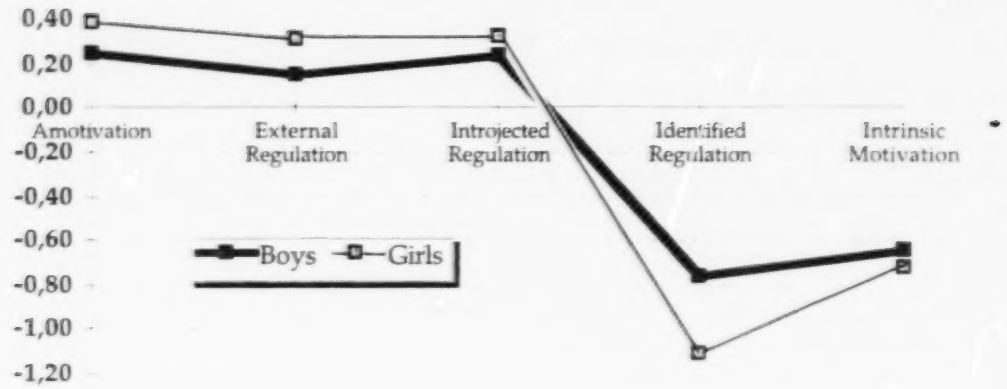

Figure 7
Motivation Change for Boys and Girls in the Randomly Selected Classes.

When comparing the motivation change of the boys and girls in both the selected and randomly selected classes (Figure 8), we can observe two different patterns. That is, highly effective teachers have a greater positive motivational impact on boys than on girls. In the randomly selected classes, teachers seemed to have a greater negative motivational impact on girls than on boys.

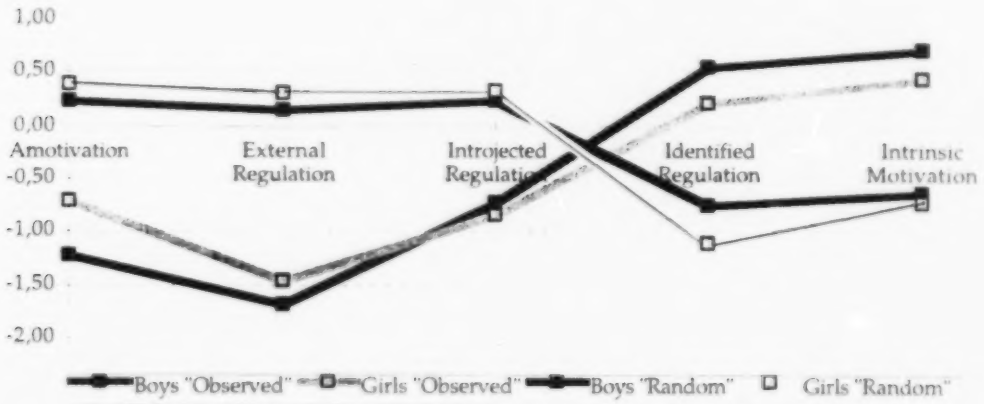

Figure 8
Motivation Change for Boys and Girls in Both the Observed Classes and the Randomly Selected Groups.

DISCUSSION

Apparently, a certain balance tends to occur between girls' and boys' motivation at the elementary-school level. In motivated classrooms, boys' motivation seems to increase more than that of girls, thereby catching up. However, in less motivated classrooms it is the reverse, girls' motivation seems to decrease more than that of boys, therefore « catching down ».

The question to be answered is whether effective teachers, aware of the importance of motivation in their classroom, tend to make more efforts with those who seem to be lacking motivation, generally boys. Similarly, less effective teachers, less conscious of the need to motivate their students, might have a more negative impact on more motivated students, usually girls. However, as pointed out by Pintrich and Schunk (1996), it is important to keep in mind that there are a number of problems with making broad generalizations about gender. Other variables, such as within group differences, have often been ignored by studies and should not be neglected.

In the future, it would be most interesting to conduct additional studies to uncover why effective and motivating teachers have a different motivational impact on boys than on girls. Is it because they give more attention to potentially less-motivated students; boys? Is it because their teaching strategies appeal more to boys than girls? These questions may be difficult to answer but they certainly highlight the need for further research on gender differences and motivation.

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